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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/769,090
Filing Date: January 30, 2004
Appellant(s): MIU ET AL.

John P. Wagner, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 4, 2010 appealing from the Office action mailed September 2, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US PATENT 6,594,245 B1	RIMHAGEN ET AL.	7-2003
US PGPUB 2003/0009576 A1	APOSTOLOPOULOS ET AL.	1-2003
US PGPUB 2003/0078045 A1	NORSTROM ET AL.	4-2003
US PGPUB 2002/0085498 A1	NAKAMICHI ET AL.	7-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 6, 7, 9-12, 16-18, 20, 25, 26, 29, 30, 32-34, 38, and 40 are rejected under 35 USC 103(a) as being unpatentable over **Rimhagen et al. (US Patent 6,594,245, hereinafter Rimhagen)** in view of **Apostolopoulos et al. (US PGPUB 2003/0009576, hereinafter Apostolopoulos)** and further in view of **Norstrom et al. (US PGPUB 2003/0078045 A1, hereinafter Norstrom)**

Consider **claim 1**. Rimhagen discloses a method for delivering data, in a wireless system comprising a distributed infrastructure of access points (abstract, figure 1, column 1 lines 9-13) said method comprising:

identifying a plurality of access points to be used cooperatively in combination with each other for transmission of said data to a receiver, wherein cooperative usage of said plurality of access points is maintained for at least some portion of a data transmission period (column 2 lines 6-12, column 4 lines 3-4, 16-35, 43-46, 53-62, read as the network provides data to the mobile stations via multiple base stations when the mobile cannot be served by a single station due to congestion);

enabling the transmission of said data to said server via said plurality of access points, wherein said data is transmitted in a pattern that uses at least two access points during at least some portion of said data transmission period and wherein said pattern is selected from a group of predetermined transmission patterns (figures 1 and 4, column 4 lines 53-62, column 5 lines 20-28, lines 54-56, column 6 lines 27-44, read as transmitting data to a mobile station via a plurality of base stations when a single base station is not capable of sending all of the information on its own. In addition, Rimhagen teaches that the network may assign multiple communication stations as necessary to service the communication that is requested by the

remote communication station. This assignment is based on thresholds of available bandwidth and/or acceptable signal quality (column 5 lines 20-28). In other words, the thresholds are predetermined and the pattern is the number of communication stations that are transmitting data to the remote communication station);

and determining, during transmission, the bandwidth requirements to enable transmitting at least a portion of said data through a different access point while the transmission is in progress (column 5 lines 14-16, lines 21-27, read as the network analyzes the bandwidth requirements and the network may therefore assign multiple base stations when the bandwidth required for the communication request exceeds the available bandwidth resources of the best serving base station).

Rimhagen discloses the claimed invention except he fails to disclose determining the performance of at least one of said access points being used for the transmission.

However, Apostolopoulos discloses performance of at least one of said access points being used for the transmission (paragraphs 52, 149, read as a mobile client moves away from one base station and towards another base station, the channel quality of the first base station and the second base station decreases and increases, respectively. When in region B, the second station rises above the add-threshold and as a result simultaneous communication between both base stations is established. Also, Apostolopoulos shows that encoding may be done in advance (i.e. predetermined) in which case the pre-computed MD streams are stored on a content server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Apostolopoulos into the teachings of

Rimhagen in order for a mobile client to be able to receive and decode a multiple description bitstream to produce usable quality (paragraph 40).

In addition, Rimhagen and Apostolopoulos fail to explicitly teach wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps.

However, Norstrom teaches wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps (paragraphs 15, 26, 27, read as synchronization is accomplished by using a time stamp to calculate and synchronize between the data streams at the first and second servers. The synchronization is read as performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations (paragraph 12).

Consider **claim 10**. Rimhagen discloses a method for delivering data utilizing a multiple access point transmission scheme (abstract, figure 1, column 1 lines 9-13), said method comprising:

identifying a plurality of access points to be used cooperatively in combination with each other for transmission of said data to a receiver wherein said cooperative usage of said plurality of access points is maintained for at least some portion of a data transmission period (column 2

lines 6-13, column 4 lines 3-4, 16-35, 43-46, 53-62, read as the network provides data to the mobile stations via multiple base stations when the mobile cannot be served by a single station due to congestion);

delivering a first portion of said data to said receiver via first access point; delivering a second portion of said data to said receiver via a second access point, wherein first portion of said data and said second portion of said data are delivered to said receiver utilizing at least one predetermined multi-access transmission scheme (figures 1 and 4, column 4 lines 53-62, column 5 lines 20-28, lines 54-56, column 6 lines 27-44, read as transmitting data to a mobile station via a plurality of base stations when a single base station is not capable of sending all of the information on its own); and

determining, during the delivering of said first and second portions, the bandwidth requirements performance of at least one of said access points being used for the delivering of said first and second portions to enable delivering at least a portion of said data through a different access point while the first and second portions are being delivered and wherein said first and said second access points operate cooperatively and in combination by transmitting different portions of said data in an alternating matter (column 4 lines 53-57, column 5 lines 14-16, lines 21-27, read as the network analyzes the bandwidth requirements and the network may therefore assign multiple base stations when the bandwidth required for the communication request exceeds the available bandwidth resources of the best serving base station. In addition, Rimhagen states that multiple communication stations may include splitting information between the multiple serving communication stations. Therefore, the information flow (i.e. data) is split

between or among the serving communication stations (column 4 lines 53-57). If data is split, then the different serving communication stations transmit different portions of data).

Rimhagen discloses the claimed invention except the determining the performance of at least one of said access points being used for the delivering of said first and second portions.

However, Apostolopoulos discloses determining the performance of at least one of said access points being used for the delivering of said first and second portions (paragraphs 52, 149, read as a mobile client moves away from one base station and towards another base station, the channel quality of the first base station and the second base station decreases and increases, respectively. When in region B, the second station rises above the add-threshold and as a result simultaneous communication between both base stations is established. Also, Apostolopoulos shows that encoding may be done in advance (i.e. predetermined) in which case the pre-computed MD streams are stored on a content server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Apostolopoulos into the teachings of Rimhagen in order for a mobile client to be able to receive and decode a multiple description bitstream to produce usable quality (paragraph 40).

In addition, Rimhagen and Apostolopoulos fail to explicitly teach wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps.

However, Norstrom teaches wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps (paragraphs 15, 26, 27, read as synchronization is accomplished by using a time stamp to calculate and

synchronize between the data streams at the first and second servers. The synchronization is read as performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations (paragraph 12).

Consider **claim 16**. Rimhagen discloses a system for data delivery in a wireless system comprising a distributed infrastructure of access points (abstract, column 1 lines 9-13), said system comprising:

an access point identifier that identifies a plurality of access points to be used cooperatively in combination with each other for the transmission of said data from a sender to a receiver wherein said cooperative usage of said plurality of access points is maintained for at least some portion of a data transmission period (column 2 lines 6-13, column 4 lines 3-4, 16-35, 43-46, 53-62, read as the network provides data to the mobile stations via multiple base stations when the mobile cannot be served by a single station due to congestion);

a multiple-access point data transmission enabler communicatively coupled to said access point identifier, said multi-access point data transmission enabler enabling the transmission of said data receiver via said plurality of access points by utilizing at least one multi-access point transmission scheme that uses at least two access points during at least some portion of said data transmission period (figures 1 and 4, column 4 lines 53-62, column 5 lines 20-28, lines 54-56,

column 6 lines 27-44, read as transmitting data to a mobile station via a plurality of base stations when a single base station is not capable of sending all of the information on its own); and wherein said multi-access point data transmission enabler determines, during the transmission the bandwidth requirements to enable transmitting at least a portion of said data through a different access point while the transmission is in progress and wherein said transmission scheme is selected from a group of predetermined patterns (column 5 lines 14-16, lines 21-27, read as the network analyzes the bandwidth requirements and the network may therefore assign multiple base stations when the bandwidth required for the communication request exceeds the available bandwidth resources of the best serving base station. In addition, Rimhagen teaches that the network may assign multiple communication stations as necessary to service the communication that is requested by the remote communication station. This assignment is based on thresholds of available bandwidth and/or acceptable signal quality (column 5 lines 20-28). In other words, the thresholds are predetermined and the pattern is the number of communication stations that are transmitting data to the remote communication station).

Rimhagen discloses the claimed invention except he fails to disclose determining the performance of at least one of said access points being used for the transmission.

However, Apostolopoulos discloses performance of at least one of said access points being used for the transmission (paragraphs 52, 149, read as a mobile client moves away from one base station and towards another base station, the channel quality of the first base station and the second base station decreases and increases, respectively. When in region B, the second station rises above the add-threshold and as a result simultaneous communication between both

base stations is established. Also, Apostolopoulos shows that encoding may be done in advance (i.e. predetermined) in which case the pre-computed MD streams are stored on a content server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Apostolopoulos into the teachings of Rimhagen in order for a mobile client to be able to receive and decode a multiple description bitstream to produce usable quality (paragraph 40).

In addition, Rimhagen and Apostolopoulos fail to explicitly teach wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps.

However, Norstrom teaches wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps (paragraphs 15, 26, 27, read as synchronization is accomplished by using a time stamp to calculate and synchronize between the data streams at the first and second servers. The synchronization is read as performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations (paragraph 12).

Consider **claim 25**. Rimhagen discloses a computer usable medium having computer usable code (abstract, figure 1 column 1 lines 9-13), embodied therein for causing a computer to perform operation comprising:

identifying a plurality of access points to be used cooperatively in combination with each other for transmission of said data to a receiver, wherein cooperative usage of said plurality of access points is maintained for at least some portion of a data transmission period (column 2 lines 6-12, column 4 lines 3-4, 16-35, 43-46, 53-62, read as the network provides data to the mobile stations via multiple base stations when the mobile cannot be served by a single station due to congestion);

enabling the transmission of said data to said server via said plurality of access points, wherein said data is transmitted in a pattern that uses at least two access points during at least some portion of said data transmission period and wherein respective access points of said plurality of access points operate cooperatively and in combination by transmitting different portions of said data in an alternating manner (figures 1 and 4, column 4 lines 53-62, column 5 lines 20-28, lines 54-56, column 6 lines 27-44, read as transmitting data to a mobile station via a plurality of base stations when a single base station is not capable of sending all of the information on its own. In addition, Rimhagen states that multiple communication stations may include splitting information between the multiple serving communication stations. Therefore, the information flow (i.e. data) is split between or among the serving communication stations (column 4 lines 53-57). If data is split, then the different serving communication stations transmit different portions of data);

and determining, during transmission, the bandwidth requirements to enable transmitting at least a portion of said data through a different access point while the transmission is in progress (column 5 lines 14-16, lines 21-27, read as the network analyzes the bandwidth requirements and the network may therefore assign multiple base stations when the bandwidth required for the communication request exceeds the available bandwidth resources of the best serving base station).

Rimhagen discloses the claimed invention except he fails to disclose determining the performance of at least one of said access points being used for the transmission and that this transmission is predetermined.

However, Apostolopoulos discloses performance of at least one of said access points being used for the transmission and that this transmission is predetermined (paragraphs 52, 149, read as a mobile client moves away from one base station and towards another base station, the channel quality of the first base station and the second base station decreases and increases, respectively. When in region B, the second station rises above the add-threshold and as a result simultaneous communication between both base stations is established. Also, Apostolopoulos shows that encoding may be done in advance (i.e. predetermined) in which case the pre-computed MD streams are stored on a content server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Apostolopoulos into the teachings of Rimhagen in order for a mobile client to be able to receive and decode a multiple description bitstream to produce usable quality (paragraph 40).

In addition, Rimhagen and Apostolopoulos fail to explicitly teach wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps.

However, Norstrom teaches wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps (paragraphs 15, 26, 27, read as synchronization is accomplished by using a time stamp to calculate and synchronize between the data streams at the first and second servers. The synchronization is read as performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations (paragraph 12).

Consider **claim 33**. Rimhagen discloses a method for delivering data, in a wireless system comprising a distributed infrastructure of access points (abstract, figure 1, column 1 lines 9-13), said method comprising:

identifying a plurality of access points to be used cooperatively in combination with each other for transmission of said data to a receiver (column 2 lines 6-12, column 4 lines 3-4, 16-35, 43-46, 53-62, read as the network provides data to the mobile stations via multiple base stations when the mobile cannot be served by a single station due to congestion);

enabling the transmission of said data to said receiver via said plurality of access points utilizing at least one multi-access point transmission scheme and wherein respective access points of said plurality of access points operate cooperatively and in combination by transmitting different portions of said data in an alternating manner (figures 1 and 4, column 4 lines 53-62, column 5 lines 20-28, lines 54-56, column 6 lines 27-44, read as transmitting data to a mobile station via a plurality of base stations when a single base station is not capable of sending all of the information on its own. In addition, Rimhagen states that multiple communication stations may include splitting information between the multiple serving communication stations. Therefore, the information flow (i.e. data) is split between or among the serving communication stations (column 4 lines 53-57). If data is split, then the different serving communication stations transmit different portions of data);

and determining, during transmission, the bandwidth requirements to enable transmitting at least a portion of said data through a different access point while the transmission is in progress (column 5 lines 14-16, lines 21-27, read as the network analyzes the bandwidth requirements and the network may therefore assign multiple base stations when the bandwidth required for the communication request exceeds the available bandwidth resources of the best serving base station).

Rimhagen discloses the claimed invention except he fails to disclose determining the performance of at least one of said access points being used for the transmission.

However, Apostolopoulos discloses performance of at least one of said access points being used for the transmission (paragraphs 52, 149, read as a mobile client moves away from one base station and towards another base station, the channel quality of the first base station and

the second base station decreases and increases, respectively. When in region B, the second station rises above the add-threshold and as a result simultaneous communication between both base stations is established. Also, Apostolopoulos shows that encoding may be done in advance (i.e. predetermined) in which case the pre-computed MD streams are stored on a content server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Apostolopoulos into the teachings of Rimhagen in order for a mobile client to be able to receive and decode a multiple description bitstream to produce usable quality (paragraph 40).

In addition, Rimhagen and Apostolopoulos fail to explicitly teach wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps.

However, Norstrom teaches wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps (paragraphs 15, 26, 27, read as synchronization is accomplished by using a time stamp to calculate and synchronize between the data streams at the first and second servers. The synchronization is read as performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations (paragraph 12).

Consider **claims 2 and as applied to claims 1**. Rimhagen and Apostolopoulos disclose wherein said pattern is selected from a group of predetermined transmission patterns (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Consider **claims 3, 26, and 34 and as applied to claims 1, 25, and 33, respectively**. Rimhagen and Apostolopoulos disclose wherein said pattern is a split-balanced transmission pattern (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Consider **claims 6, 15, 29, and 37 and as applied to claims 1, 10, 25 and 33, respectively**. Rimhagen and Apostolopoulos disclose wherein respective access points of said plurality of access points operate cooperatively and in combination by transmitting different portions of said data in an alternating manner (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Consider **claims 7, 12, 30, and 38 and as applied to claims 1, 11, 25 and 33, respectively**. Rimhagen and Apostolopoulos disclose wherein respective access points of said plurality of access points operate cooperatively and in combination by facilitating the transmission of a majority of said data over a first access point and the transmission of a remainder of said data over a second access point (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Consider **claims 9, 32, and 40 and as applied to claims 1, 25 and 33, respectively**. Rimhagen and Apostolopoulos disclose wherein said pattern is selected based upon information

from the group consisting of various predetermined patterns, measurements from a variety of sources, and the content of said data to be transmitted (Rimhagen; column 3 lines 52-62, Apostolopoulos; paragraphs 52, 149).

Consider **claim 11 and as applied to claim 10**. Rimhagen and Apostolopoulos disclose wherein said multi-access point transmission scheme comprises a split-balanced transmission scheme wherein data portions are evenly balanced across said plurality of access points (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Consider **claim 17 and as applied to claim 16**. Rimhagen and Apostolopoulos disclose a measurement subsystem coupled to said multi-access point data transmission enabler, said measurement sub-system providing measurements that are used by said multi-access point data transmission enabler to determine data packet allocations across said plurality of access points (Rimhagen; column 2 lines 6-12, column 6 lines 27-44, column 7 line 37 – column 8 line 8).

Consider **claim 18 and as applied to claim 17**. Rimhagen and Apostolopoulos disclose a data packet relaying component coupled to said multi-access point data transmission enabler, said data packet relaying component for relaying data packets to said receiver that are transmitted to said data packet relaying component from said sender (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44, column 7 line 37 – column 8 line 8).

Consider **claim 20 and as applied to claim 18**. Rimhagen and Apostolopoulos disclose wherein said access point identifier, said multi-access point data transmission enabler, said

measurement sub-system, and said data packet relaying component are not all resident at the same system nodes (Rimhagen; abstract, figures 2 and 4, column 2 lines 6-15, column 4 lines 53-62, column 5 lines 20-28, 54-56, column 6 lines 27-44).

Claims 4, 5, 8, 13, 14, 19, 21- 24, 27, 28, 31, 35, 36, and 39 are rejected under 35 USC 103(a) as being unpatentable over **Rimhagen et al. (US Patent 6,594,245, hereinafter Rimhagen)** in view of **Apostolopoulos et al. (US PGPUB 2003/0009576, hereinafter Apostolopoulos)** in view of **Norstrom et al. (US PGPUB 2003/0078045 A1, hereinafter Norstrom** and further in view of **Nakamichi et al. (US PGPUB 2002/0085498, hereinafter Nakamichi)**.

Consider **claims 4, 27, 35, and as applied to claims 1, 25, and 33, respectively**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose the pattern is a site selection transmission pattern.

Nakamichi discloses a site selection transmission pattern (paragraphs 10, 11, 15, 16, 17, 41, 50, and 147, read as the access points in the network adjust the way data is transmitted based on feedback obtained from monitoring the traffic congestion of the access points).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to enable dynamic load balancing in the network (paragraphs 10 and 11).

Consider **claims 5, 14, 28, and 36 and as applied to claims 1, 12, 25, and 33, respectively**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except

they fail to explicitly disclose wherein said pattern is a combination of a split-balanced transmission pattern and a site selection transmission pattern.

Nakamichi discloses wherein said pattern is a combination of a split-balanced transmission pattern and a site selection transmission pattern (paragraphs 10, 11, 15, 16, 17, 41, 50, and 147, read as the access points in the network adjust the way data is transmitted based on feedback obtained from monitoring the traffic congestion of the access points).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to enable dynamic load balancing in the network (paragraphs 10 and 11).

Consider **claims 8, 13, 31, and 39 and as applied to claims 7, 12, 30, and 38, respectively**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said remainder of said data is used to gather information related to said second access point.

Nakamichi discloses wherein said remainder of said data is used to gather information related to said second access point (paragraphs 10, 11, 15, 16, 17, 41, 50, and 147, read as the access points in the network adjust the way data is transmitted based on feedback obtained from monitoring the traffic congestion of the access points).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of

Rimhagen, Apostolopoulos, and Norstrom to enable dynamic load balancing in the network (paragraphs 10 and 11).

Consider **claim 19 and as applied to claim 18**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said access point identifier, said multi-access point data transmission enabler, said measurement sub-system, and said data packet relaying component are all resident at the same system node.

Nakamichi discloses wherein said access point identifier, said multi-access point data transmission enabler, said measurement sub-system, and said data packet relaying component are all resident at the same system node (figure 2, paragraphs 35, 53, 55, 57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to decrease delays (paragraph 10).

Consider **claim 21 and as applied to claim 18**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said access point identifier and said multi-access point data transmission enabler are resident at said receiver.

Nakamichi discloses wherein said access point identifier and said multi-access point data transmission enabler are resident at said receiver (figure 2, paragraphs 35, 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to decrease delays (paragraph 10).

Consider **claim 22 and as applied to claim 18**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said access point identifier and said multi-access point data transmission enabler are resident at said sender.

Nakamichi discloses wherein said access point identifier and said multi-access point data transmission enabler are resident at said sender (figure 2, paragraphs 35, 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to decrease delays (paragraph 10).

Consider **claim 23 and as applied to claim 18**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said access point identifier and said multi-access point data transmission enabler are resident at least one intermediate system node.

Nakamichi discloses wherein said access point identifier and said multi-access point data transmission enabler are resident at least one intermediate system node (figure 2, paragraphs 35, 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to decrease delays (paragraph 10).

Consider **claim 24 and as applied to claim 18**. Rimhagen, Apostolopoulos, and Norstrom disclose the claimed invention except they fail to explicitly disclose wherein said access point identifier and said multi-access point data transmission enabler are located at least one of said plurality of access points.

Nakamichi discloses wherein said access point identifier and said multi-access point data transmission enabler are located at least one of said plurality of access points (figure 2, paragraphs 35, 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Nakamichi into the teachings of Rimhagen, Apostolopoulos, and Norstrom to decrease delays (paragraph 10).

(10) Response to Argument

i. The combination of Rimhagen, Apostolopoulos and Norstrom does not satisfy the requirements of a *prima facie* case of obviousness.

With regard to Appellant's argument that the combination of Rimhagen, Apostolopoulos, and Norstrom do not teach, describe or suggest the invention as claimed because the combination of the Rimhagen, Apostolopoulos, and Norstrom does not satisfy the requirements of a *prima facie* case of obviousness, the examiner respectfully disagrees. The examiner relied upon Apostolopoulos to provide Appellants with evidence that one of ordinary skill makes

determinations of the performance of access point(s) that are used for transmission of data to mobile stations. Apostolopoulos is analogous to Rimhagen because both references pertain to scheduling of data in situations such as congestion and handover (Rimhagen; column 4 lines 56-60, column 5 lines 57-60, Apostolopoulos; paragraph 45). Rimhagen specifically teaches that data is provided to mobile stations via multiple base stations when the mobile cannot be served by a single base station (column 2 lines 6-12, column 4 lines 3-4, 16-35, 43-46, and 53-62). A situation similar to this might occur due to congestion, interference, or handoff, which therefore causes a loss of quality. When such situations occur, the network has to be informed so that the appropriate action can be taken (i.e. transmitting data to a mobile station via a plurality of base stations (column 4 lines 53-62, column 5 lines 20-28, lines 54-56, column 6 lines 27-44)). Therefore, such a feature as determining the performance of at least one of said access points being used for the transmission must be in Rimhagen's method in order for the cooperative transmission to occur. Nonetheless, the examiner relied upon Apostolopoulos to explicitly show Appellant this limitation.

Moreover, the examiner relied on Norstrom wherein data packets of said data comprise timestamps and wherein said performance is based at least on examination of said timestamps. The usage of timestamps is well known in the art; however, the examiner provided Appellants with Norstrom since this reference pertains to scheduling of data in the case of performing handover (paragraph 13). Rimhagen and Apostolopoulos as stated above, pertain to distribution/scheduling of data in situations such as congestion and handover. Norstrom teaches that synchronization is accomplished by using a time stamp to calculate and synchronize between the data streams at the first and second servers. The synchronization is read as

performance since the time stamps are used to establish synchronization. If network does not have data stream synchronization between servers or base stations, performance is lacking. Therefore, the time stamps are calculated (i.e. examined) for synchronization or performance (paragraphs 15, 26, 27). Norstrom is analogous to Rimhagen and Apostolopoulos since both references are applicable to handoff (Rimhagen; column 4 lines 56-60, column 5 lines 57-60, Apostolopoulos; paragraph 45).

Lastly, the examiner provided reasons for obviousness in combining Norstrom with Rimhagen and Apostolopoulos. The examiner stated that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Norstrom into the invention of Rimhagen and Apostolopoulos in order to efficiently and seamlessly transmit data to a user from two different locations." Once again, the examiner took this motivation from Norstrom in paragraph 12.

a. Claims 1, 3, 6, 7, 9, 16-18 and 20

With regard to Appellant's argument that Rimhagen in view of Apostolopoulos further in view of Norstrom does not teach or suggest, "enabling the transmission of said data to said receiver via said plurality of access points, wherein said data is transmitted in a pattern that uses at least two access points during at least some portion of said data transmission period, wherein data packets of said data comprise timestamps and wherein said pattern is selected from a group of predetermined patterns," the examiner respectfully disagrees. Rimhagen teaches that the network may assign multiple communication stations as necessary to service the communication that is requested by the remote communication station. This assignment is based on thresholds of available bandwidth and/or acceptable signal quality (column 5 lines 20-28). In other words,

the thresholds are predetermined and the pattern is the number of communication stations that are transmitting data to the remote communication station. The examiner further draws Appellant's attention to paragraph 147 of Apostolopoulos. Apostolopoulos discloses "the following example will further assume that the media to be streamed (e.g. a video stream) has been or will be encoded into two separate complimentary MD bitstreams, D_0 and D_1, whose combined data-rate is close to that of D, of FIG. 9. Such MD coding to provide multiple description bitstreams has been described above in detail. Furthermore, the present example also assumes that both the first MD bitstream, D_0, and the second MD bitstream, D_1, are each stored both at base station 904 and base station 906." In other words, the two separate complimentary MD bitstreams D_0 and D_1 are previously encoded and stored (i.e. predetermined) for the base stations to transmit the data. As can be observed in figure 10 of Apostolopoulos, the base stations are aware of which data stream is sent by which base station (i.e. predetermined pattern).

b. Claims 10-12, 25, 26, 29, 30, 32-34, 38 and 40

With regard to Appellant's argument that Rimhagen, Apostolopoulos, and Norstrom fail to disclose wherein said first and said second access points operate cooperatively and in combination by transmitting different portions of said data in an alternating matter, the examiner respectfully disagrees. Rimhagen states that multiple communication stations may include splitting information between the multiple serving communication stations. Therefore, the information flow (i.e. data) is split between or among the serving communication stations (column 4 lines 53-57). If data is split, then the different serving communication stations transmit different portions of data. Figure 3A shows this particular feature, where the mobile

station is transmitted three different packets to three different base stations, however, this feature is applicable in the receive direction as well (column 3 lines 29-67).

ii. Rimhagen teaches away from the suggested modification and combination with Apostolopoulos

With regard to Appellant's argument that by disclosing splitting of information to be sent from several CSs, that Rimhagen teaches away from the suggested medication to provide for handing off streaming media, as disclosed in Apostolopoulos, the examiner respectfully disagrees. Rimhagen provides data to mobile stations via multiple base stations when the mobile cannot be served by a single station (column 2 lines 6-12, column 4 lines 3-4, 16-35, 43-46, and 53-62). The present application recites a plurality of access points to be used cooperatively in combination with each other for transmission of data to a receiver. Therefore, Rimhagen pertains to Appellant's invention. The examiner also notes that channel allocation, which is what the present application largely applies to, overlaps into the handoff area of wireless communication. After all, when a mobile station moves from one area to another area, the base stations are cooperating to allocate resources for the moving mobile station. The examiner supports this assertion by drawing Appellant's attention to the abstract of Rimhagen. Rimhagen states that "a user requiring three time slots per frame in order to aggregate sufficient bandwidth may be in communication with three different cells during each frame. The present invention may additionally be applied in the context of handoffs, when, for example, an MS continues to be partially served by the previous cell before the new cell is able to service the high data-rate information flow." Therefore, Rimhagen is applicable to handoffs, which is disclosed by Apostolopoulos and Norstrom (as Appellants have disclosed). As a result, Rimhagen does not

teach away from Apostolopoulos and Norstrom. Therefore, the combination of Rimhagen, Apostolopoulos, and Norstrom would not require substantial reconstruction and redesign. In addition, the examiner provided Appellants with motivation. Specifically, the examiner stated in the previous communication, "Therefore, it would have been obvious to one of ordinary skill in the art….in order to produce usable quality." It is noted that this motivation was found in the Apostolopoulos reference in paragraph 40. As stated above, Norstrom provides efficient and seamless transmit data to a user from two different locations, which can be found in paragraph 12.

2. Whether Claims 4, 5, 8, 13, 14, 19, 21-24, 27, 28, 31, 35, 36 and 39 are unpatentable under 35 USC 103(a) over Rimhagen in view of Apostolopoulos, in further view of Norstrom and in yet further view of Nakamichi.

The examiner respectfully submits that, as argued above, the combination of Rimhagen, Apostolopoulos, and Norstrom as a whole discloses the features of Appellant's Claims and the combination of Rimhagen, Apostolopoulos, and Norstrom does satisfy the requirements of a *prima facie* case of obviousness and Rimhagen does not teach away from the suggested modification and combination of Apostolopoulos. Therefore, Rimhagen, Apostolopoulos, Norstrom, and Nakamichi disclose "wherein said data is transmitted in a pattern" and "wherein said pattern is selected from a group of predetermined patterns." Moreover, Rimhagen, Apostolopoulos, Norstrom, and Nakamichi teach "different portions of said data in an alternating manner."

As a result, the claims are written such that they read upon the cited references.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Christopher M Brandt/

Examiner, Art Unit 2617

March 10, 2010

Conferees:

/George Eng/

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